



MARRIED STUDENT HOUSING
for the UNIVERSITY of CINCINNATI

by

Don A. Ellis

B. Arch., University of Cincinnati, 1960

SUBMITTED IN PARTIAL FULFILLMENT OF
THE REQUIREMENTS FOR THE
DEGREE OF MASTER IN ARCHITECTURE
at the
MASSACHUSETTS INSTITUTE OF TECHNOLOGY
SEPTEMBER 1961

Author

Don A. Ellis

Head of Department

Lawrence B. Anderson

Married Student Housing
for the University of Cincinnati
by
Don A. Ellis

Submitted to the Department of Architecture
on August 14, 1961, in partial fulfillment of the
requirements for the degree Master in Architecture.

Abstract

The object of this investigation is the solution of the problems of married student housing at an urban university, both from the students' viewpoint and from the university's; both in the general case and in the particular case considered.

Preliminary considerations include the range of building types and densities most applicable. The ultimate selection is made of a high-density, low-rise system, and this development is considered in its relation to campus and city plans and to economics, as well as its possibilities of maximal esthetic and psychological values.

Criteria are found for various aspects of the problem; from these a proposed solution is developed and presented graphically.

14 August 1961

Pietro Belluschi, Dean
School of Architecture and Planning
Massachusetts Institute of Technology
Cambridge 39, Massachusetts

Dear Dean Belluschi:

in partial fulfillment of the requirements for
the degree Master in Architecture, I submit herewith
a thesis entitled, "Married Student Housing for the
University of Cincinnati".

Sincerely,


Don A. Ellis

Acknowledgements

I should like to thank the following for their help and advice during this investigation:

Professor Imre Halasz

John Garber, Richard Wheeler, and Robert Beckley, of the firm of Garber, Tweddell, and Wheeler

George Kurilko and the Cincinnati Planning Commission

Members of the Thesis Committee

and particularly to thank Professor Eduardo F. Catalano for opening new doors during the last year.

Table of Contents

Abstract	2
Letter of Submittal	4
Acknowledgements	5
Table of Contents	6
Table of Illustrations	7
Foreword	8
The Problem	12
The Physical Characteristics	19
Design Considerations	22
Conclusions	24
The Proposal	25
Bibliography	26

Table of Illustrations

U. C. Housing Plan	15
Topographical Site Plan	21
Solution - Graphical Presentation	27 ff.

Foreword

The European university is conceived as a warehouse of ideas. The student comes to the warehouse, obtains some ideas, and retires to ponder and perhaps to predicate. The choice of situation in which to mull over and discuss an idea is left to the student.

Most American schools in urban areas were founded on this model. Many universities, however, were established in rural or suburban locations. In these latter cases, school-controlled housing for the student population was provided of necessity.

It has been increasingly recognized in the last few decades that this expedient has positive value as a part of the educational experience. The constant exposure to an atmosphere of learning, the great range of opportunity for discussion and intellectual intercourse, are attributes greatly to be desired.

Against these positive values can be weighed a negative: the creation of a close-knit clique, self-satisfied and without desire for contact with the world at large (the "town-gown" problem).

In general, universities have decided that this

detrimental characteristic of mass student housing can be circumvented, or is at any rate outweighed by the educational values stated. Consequently most schools have given great care to an organized and expanding housing program. To those schools located in outlying areas this has presented no major difficulty.

Urban universities, however, in reconsideration of their former diffidence toward student housing, find themselves very restricted in their city sites designed for academic buildings only. Efforts to build a housing system from scratch have been delayed or thwarted by high land values or complete unavailability of land. The population explosion and its coming college enrollment increase compounds the problem.

A more recent change in the collegiate system has been the advent of the married student. Before World War II, the marriage of a university student was heavily discouraged; indeed, often considered cause for dismissal.

Married veterans studying under the GI Bill radically altered this attitude, but school administrators in general tended to consider the change only temporary. When the number of married students did not

decrease as the GI Bill expired, it was still considered in many quarters as a fad, soon to settle back to pre-war conditions.

Because of this prevailing opinion, the problems of the married student occasioned little interest, if not total apathy. It has only been in very recent years, as the proportion of the married student population continues to rise, that consideration has been given to this group as a significant, permanent segment of the student body.

The conjunction of these two alterations in university thinking produces a new problem: the housing of married students. There are many requirements identical to those for single-student housing, but there are many different, or more complex, requirements also: i.e., larger unit areas, much more privacy, provision of separate cooking facilities, etc.

Although housing programs were being developed in many cases when the married student emerged, the supposed temporary nature of the problem brought about temporary solutions. Quonsets, "defense cabins", converted barracks, the typical answers, were not ideal places to live and perhaps to raise a family. But

these were all the university could justify for a supposedly short-term requirement.

However, now that the permanency of the requirement is established, many schools are endeavoring to include provision for a married population in their housing programs.

Because of the greater area requirements of this new housing, the urban university is in an even worse position with relation to expansion space, its most irreplaceable asset. This situation has forced most proposed solutions to the new problem into the high-rise pattern, a pattern definitely lacking promise for ideal family life.

High density is an economic necessity for a school surrounded by expensive or unavailable land. It remains to be seen whether requisite high density can be achieved with the amenities of low-rise housing.

The Problem

The criteria for consideration of the problem, the program requirements, can be separated into two categories: general or philosophical, and specific or statistical.

The general requirements, for the purposes of this investigation, begin with the idea that a closer connection to the earth than is provided by high-rise systems is desirable for ideal family living conditions. This is particularly true where children are involved. Man is an earth-based creature, and children epitomize this facet of his character.

The economic criterion of high density is required by the comparative lack of land available to the university for development. Although high density and low height seem incompatible initially, there is some considerable possibility that the two can be equated, or that a compromise can be brought about between the extremes of maximum density and minimum height that achieves the positive values of both. This is the general subject for investigation.

In the course of the development, there are several background criteria which must be fulfilled. The character of the surroundings and the qualities of the site must be fully considered; the solution should complement and embellish them. There should be a systematic scheme of organization promoting the unity of the solution. This scheme should allow the general organization to be comprehended visually, and should provide for adequate service according to today's technology. The solution must be economical. This does not mean that it should be cheap, or even that it cannot be high-priced; but that for every expenditure of finances or land, the maximum return should be realized. This maximum may be in space, pleasure, usefulness, flexibility, or many other qualities. In most cases it will be a carefully balanced combination, varying with the particular circumstances.

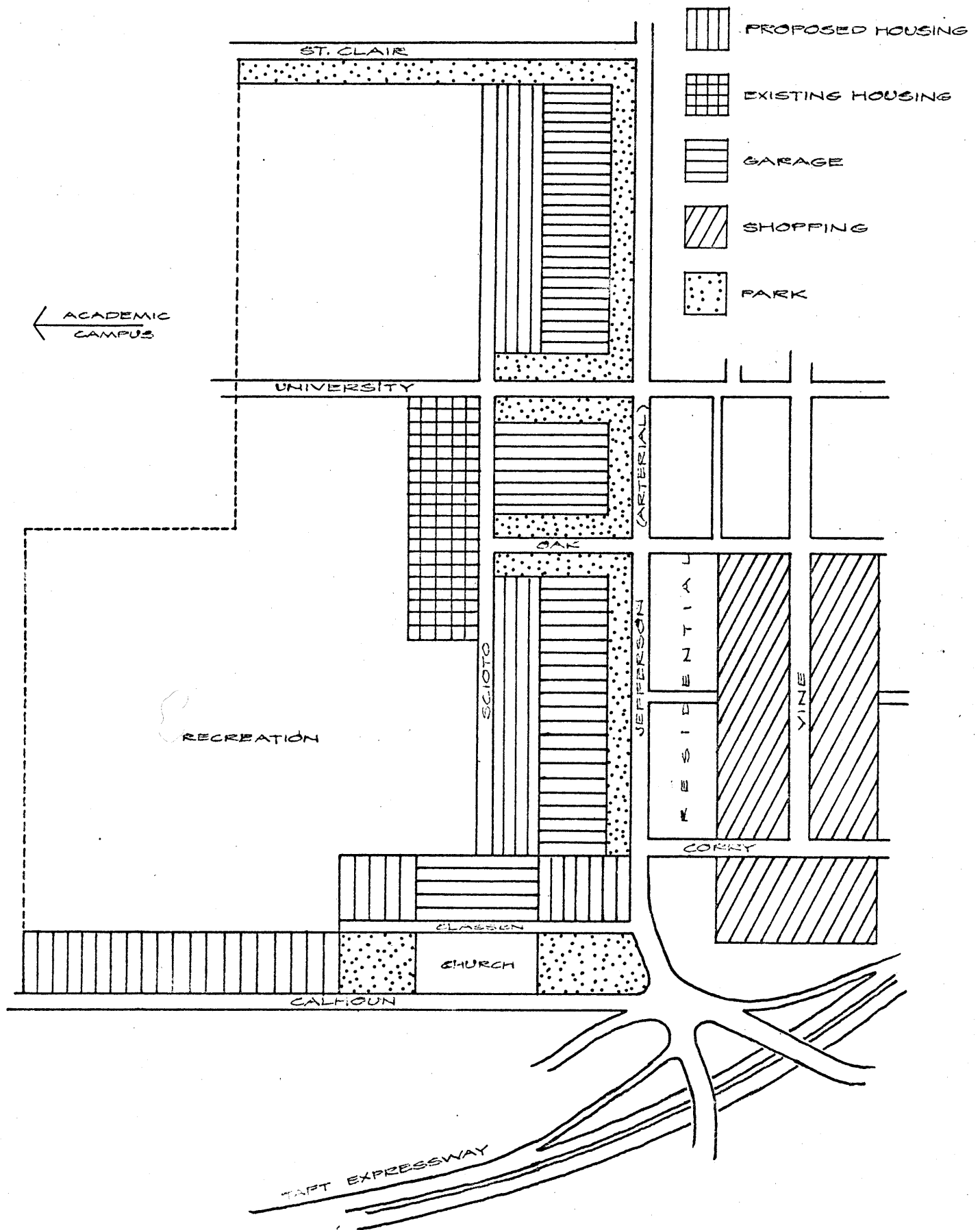
The University of Cincinnati finds itself today in precisely the situation described, with regard to housing for married students. For several years the sole provision for this group was an area containing twenty-eight folding trailers, originally built for workers in World War II. When maintenance costs and

the general unsightliness of these became oppressive, they were scrapped; since 1957 there has been no facility whatsoever.

In a new university master plan for expansion of the campus in all respects, housing is treated as a major consideration. The need for additional dormitories has long been realized; the new plan adds a proposal for married housing of considerable importance. The portion of the plan relating to housing is reproduced on the following page.

It should be noted that the new plan points out the similarity of housing requirements between married students and many married faculty members, particularly young teachers just beginning their careers. Consequently the married housing proposed is intended for both faculty and students. It is somewhat open to question whether this integration would be the ideal social and psychological condition. However the question is beyond the scope of this report, and the assumption will be accepted as valid for our purposes.

Several factors influenced the choice of location for new housing at the east edge of the campus. Among these are the all-important criterion of land either



U.C. HOUSING PLAN

vacant or developed inexpensively; the proximity to urban amenities; the strengthening of the campus boundary; the character of the topography, determining possible uses; and the effects of the ever-present parking problem.

The areas designated on the plan as proposed housing or garage areas are all either owned by the university or obtainable comparatively easily. Some of the land is vacant; the balance is occupied by single-family houses in generally poor condition.

The Cincinnati Planning Commission regards institutional land as prime frontage for a major thoroughfare. Consequently in the revamping of the street system adjoining the east campus, Jefferson Avenue will be enlarged to arterial status. This will assure ease of communication from the new housing to the central city and other points. A park buffer strip will run the length of the University frontage on Jefferson, eliminating many of the undesirable effects of a major street.

As part of the same urban project, an existing business district on Vine Street will be refurbished and extended, bringing shopping conveniently close to the housing area.

The east boundary of the campus is at present rather formless, with the recreational space shown on the housing plan bleeding off into existing residential area. The proposed construction will make the recreational area a contained green belt, and will promote the cohesion of the campus.

The topography, typical of Cincinnati, is quite hilly. The existing grid pattern of the streets does not evidence the rather extreme changes of elevation.

The parking situation at the University of Cincinnati is a bugaboo, perhaps even more so than at many other city schools, because a large proportion of the student body are city residents, and commute daily by car. By placing garage facilities adjacent to the new housing and convenient to the proposed new artery, the planners hope to effect multi-use of parking structures and to eliminate considerable traffic from the campus.

The areas in the lower left and upper right corners of the housing plan, designated as proposed housing, are already being developed as dormitories and as tower apartments for childless couples respectively.

The area, then, bounded roughly by Jefferson, Oak, Scioto, and Classen Streets is reserved for housing for families with children and for the remainder of

the childless couples. Proximity to the Vine Street shopping area was one deciding factor in this allocation.

In an early proposal, the authors of the new master plan suggested widely spaced low-rise housing for the area described. It was soon realized that correspondingly low density would not be economically justifiable. No required minimum density has ever been established by the University, however. For this reason this investigation is based on the general requirement of highest possible density commensurate with other design objectives. A generalized criterion of this sort will generate an idealized solution, which will have two possibilities of use. Either the solution itself will fulfill actual economic requirements when they are finally determined, or it will provide a basis of comparison with which to measure any less ideal solution.

The Physical Characteristics

Cincinnati is located in the hills of southwestern Ohio. Its typical topography is at an angle. This provides opportunity for considerable visual excitement in its architecture; unfortunately, in many areas this opportunity has not been grasped to the fullest.

One would suppose on viewing a street map of Cincinnati that many of its parts were prairie excerpts, with the gridiron streets of the flatlands. It is not uncommon for a small residential yard to be separated from its neighbor by a ten- or fifteen-foot retaining wall.

This lack of respect for contours is true of the residential area adjoining the site under consideration, and it is true of much of the campus itself. But with important exceptions: the stadium, the new Applied Arts College, entities large and important enough to disdain conformity, follow the natural topography closely. Far from conflicting with the general scheme, these buildings add a note of order sometimes lacking otherwise.

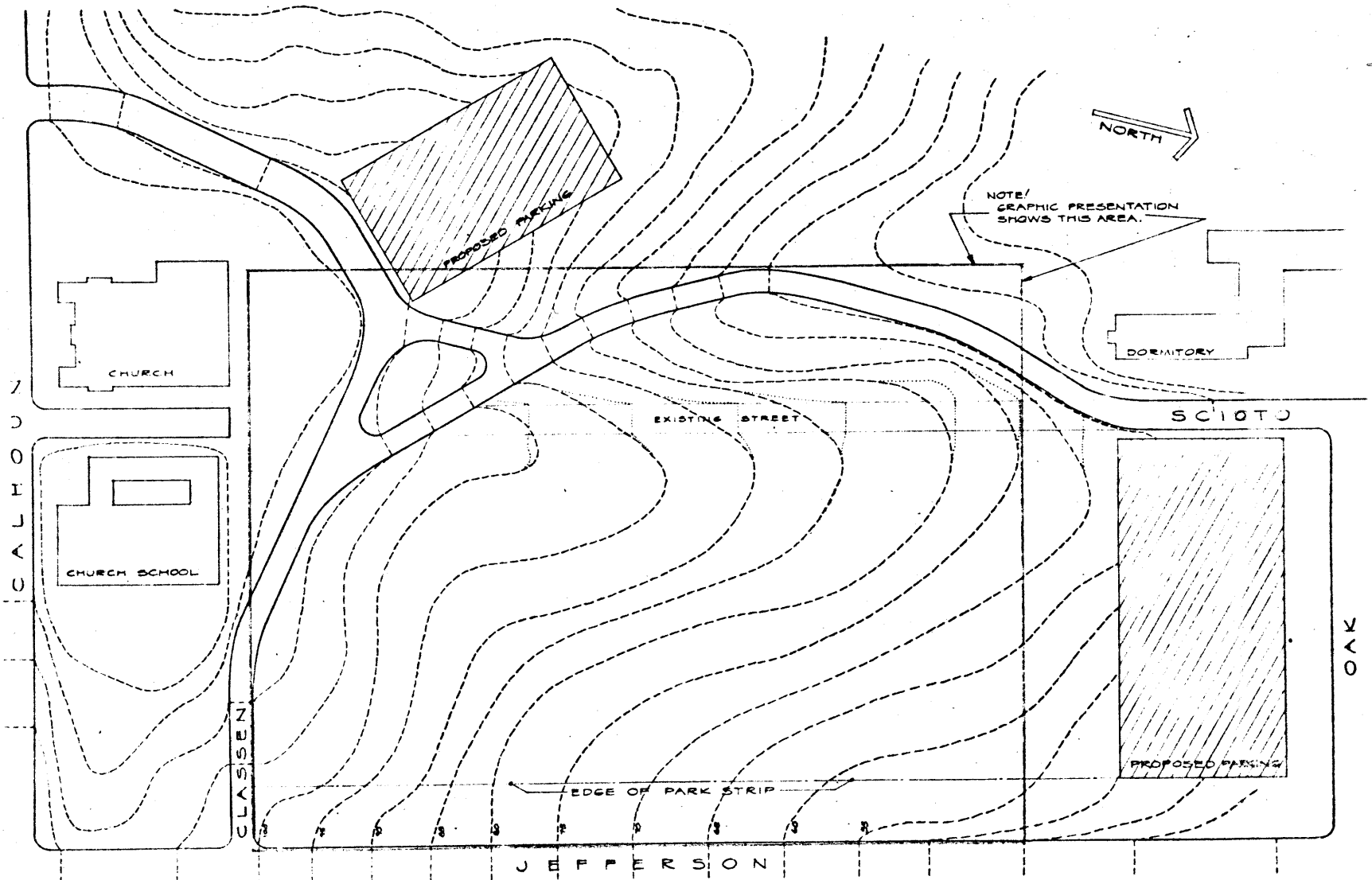
Similarly, the married housing development, if it is a cohesive whole, may disregard the arbitrary restrictions of grids in order to maximize the possibilities of the site.

A topographic map of the site is reproduced on the next page. The area devoted to housing has been consolidated for greater unity, with parking structures at both ends, rather than mixing the two the length of the site as the master plan suggests.

In addition, Scioto Street has been moved over from its somewhat awkward position on the side of the hill to a more natural valley location. This encroaches slightly on the open area below, but in compensation it allows the hill to be developed as a complete form rather than as a piece.

The parking structure southwest of the housing area is situated on a knoll, with an access road connecting Scioto and Classen and running through to Calhoun, in order to better serve the dormitories in that direction.

The finished site, then, is a complete hillside. It has close access to shopping and to an arterial street; it has parking facilities at either end; it looks in one direction over a park, and in the other over a green belt.



DEVELOPED SITE
SCALE 1"=160'-0"

Design Considerations

To develop some specific design criteria it is helpful to enumerate some typical shortcomings of projects attempting similar problems.

The high-density, high-rise scheme usually lacks a sense of community. Its organization can often be comprehended all too simply; it supplies no intrigue. Its relation to the earth beneath it is minimal, that of an object on a base. Access and service are necessarily complex and often difficult. It can usually be characterized by the banalities of repetition, lack of privacy, and long corridors.

The spread-out, low-density solution, although often well related to its site, almost always lacks the cohesion necessary to make it an understandable unity. It affords no protection to those traversing it. For adequate service, it often needs a great number of roads.

A positive criterion that solves several of these difficulties simultaneously is the organizational space - a central element relating to all its surroundings

and thereby bringing them together.

For continuing interest, the solution should provide a multiplicity of experiences, but this should not negate its unified character as a whole. Service and access should be reasonably easy and convenient, if possible without the usual wall of doors.

Privacy is essential, but just as essential is a fostered sense of community. Amenities should be at a maximum within the scope of the problem.

Conclusions

The site under consideration has a natural axis perpendicular to the contours; this provides a basis for ideal placement of the organizational space, related directly to the site.

A straightforward, direct interior circulation should serve each unit. In addition, however, an exterior system would afford pleasure and convenience most of the time; it could also provide additional spatial experiences, and a series of community spaces subsidiary to the organizational space.

The individual unit should provide complete privacy, but should also allow for direct contact with the community as an entity. The units should fit together so as to satisfy both simple construction and a range of opportunities and accommodations. The statistical makeup of the solution should be largely efficiency and two-bedroom units, since applicable information points to the obsolescence of the one-bedroom apartment for this sort of development.

Possibly some minor commercial facilities - the barber, the drug store, etc., should be included for maximum convenience.

The Proposal

The proposed solution presented graphically on page 27 ff. consists of 184 units on 5.95 acres of land, including interior and exterior spaces, but excluding park strips and garage structures. This is a density of thirty-one families or 112 persons per acre.

Each apartment unit has a private court or terrace, and each has both interior and exterior access. Construction is of brick cavity walls and concrete flat slabs.

Bibliography

Avondale-Corryville General Neighborhood Renewal Plan.
Cincinnati: Cincinnati City Planning Commission, 1960.

U. C. Plans. Cincinnati: Garber, Tweddell, and Wheeler,
Architects, 1960.

Lynch, Kevin, and Rodwin, Lloyd, Editors. "The Future
Metropolis". Daedalus, Winter 1961

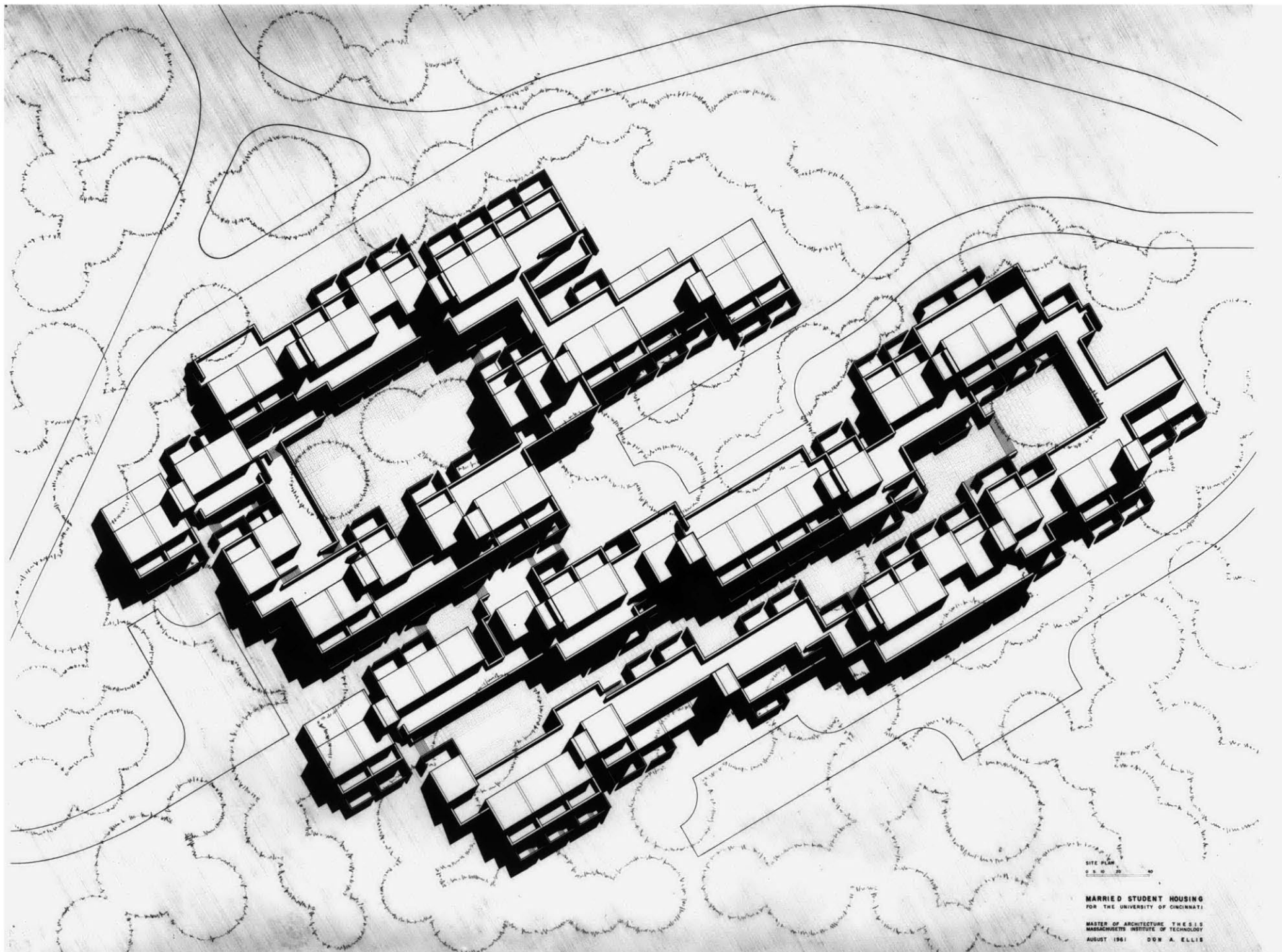
Weinstock, Ruth. Space and Dollars: An Urban University Expands. New York: Educational Facilities Laboratories, 1960.



CAMPUS PLAN
0 50 100 200 400

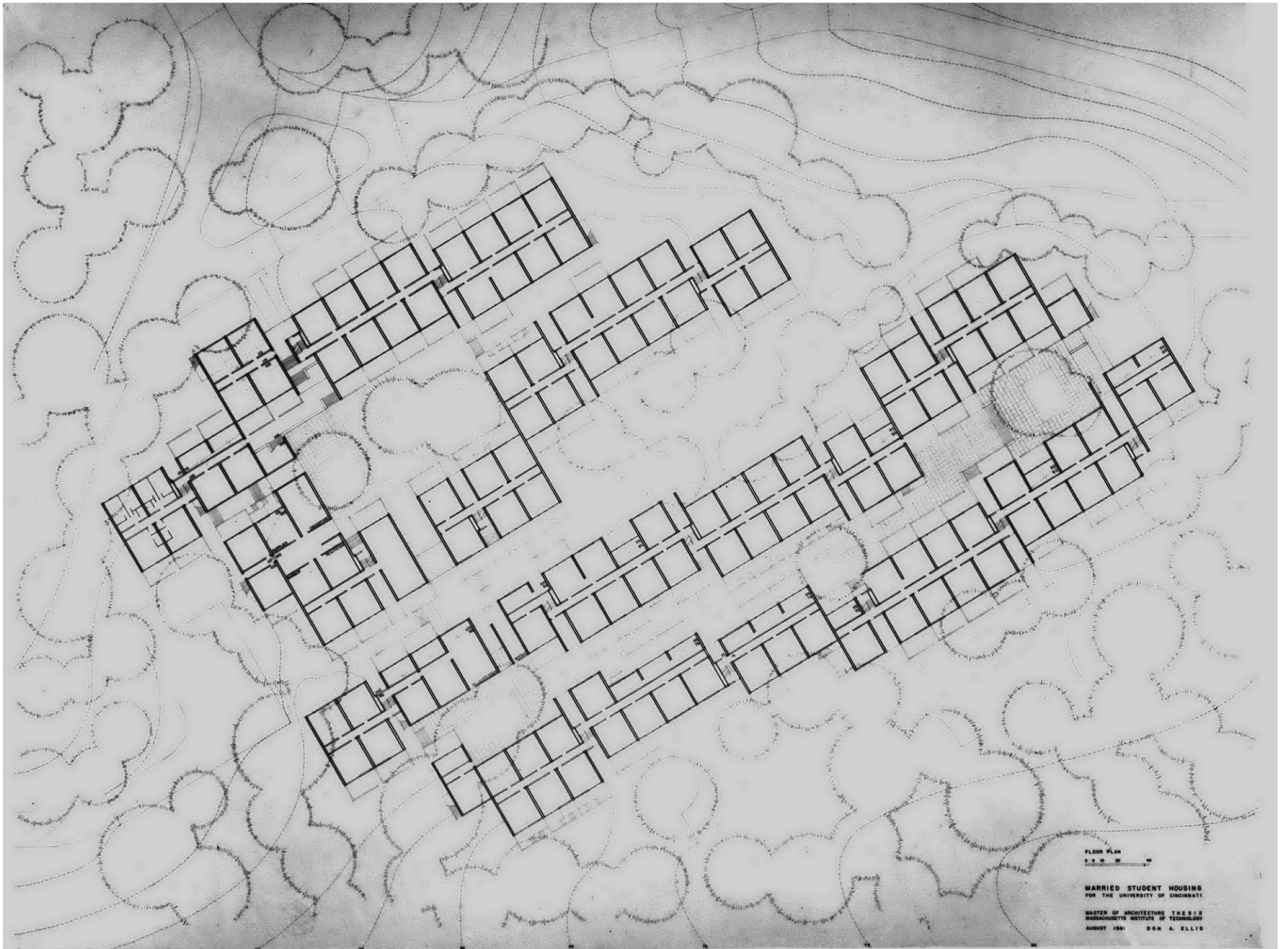
MARRIED STUDENT HOUSING
FOR THE UNIVERSITY OF CINCINNATI

MASTER OF ARCHITECTURE THESIS
MASSACHUSETTS INSTITUTE OF TECHNOLOGY
AUGUST 1961 DON A. ELLIS



SITE PLAN
0 5 10 20 40

MARRIED STUDENT HOUSING
FOR THE UNIVERSITY OF CINCINNATI
MASTER OF ARCHITECTURE THESIS
MASSACHUSETTS INSTITUTE OF TECHNOLOGY
AUGUST 1961 DON A. ELLIS



FLOOR PLAN
0 10 20

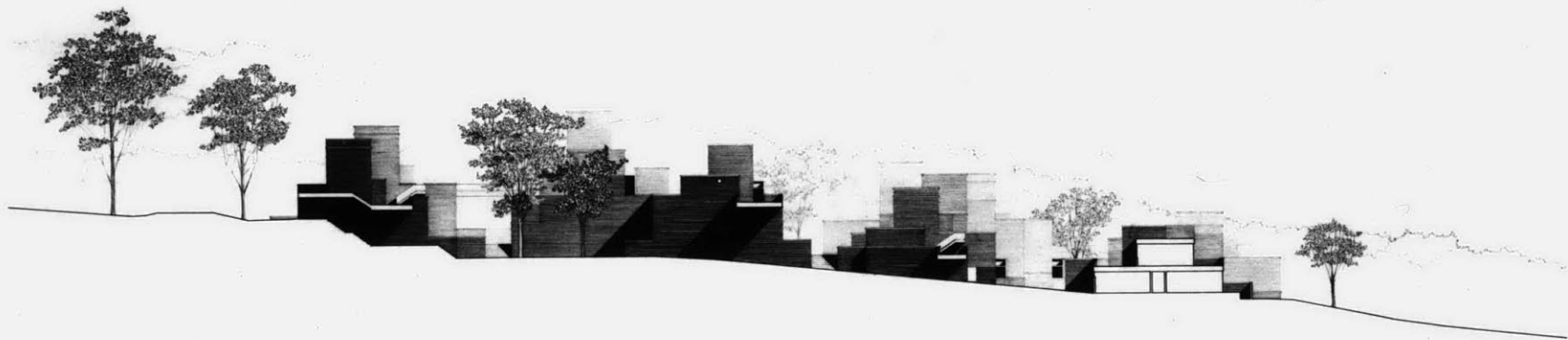
MARRIED STUDENT HOUSING
FOR THE UNIVERSITY OF CINCINNATI
MASTER OF ARCHITECTURE THESIS
MASSACHUSETTS INSTITUTE OF TECHNOLOGY
AUGUST 1961 DON A. ELLIS



ELEVATION
0 5 10 20 40

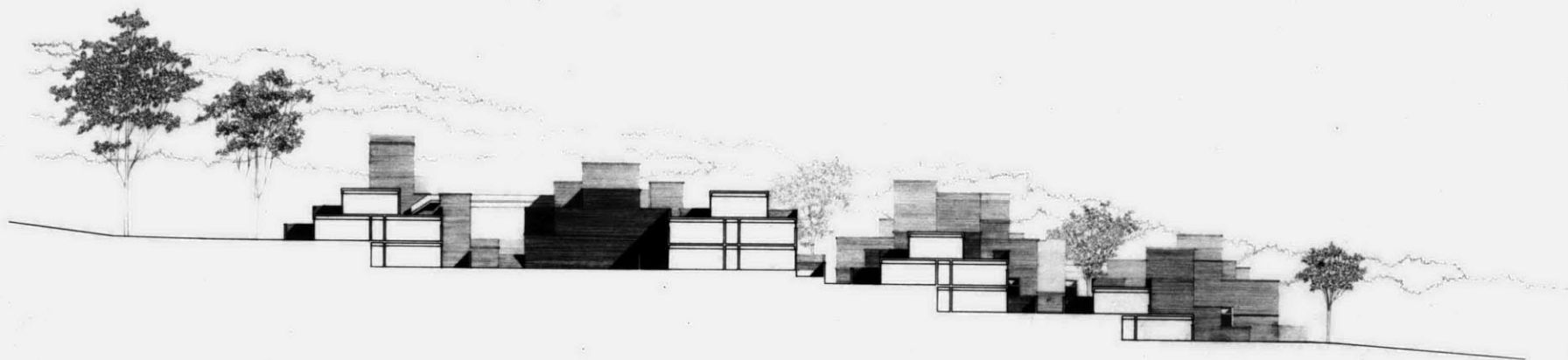
MARRIED STUDENT HOUSING
FOR THE UNIVERSITY OF CINCINNATI

MASTER OF ARCHITECTURE THESIS
MASSACHUSETTS INSTITUTE OF TECHNOLOGY
AUGUST 1961 DON A. ELLIS



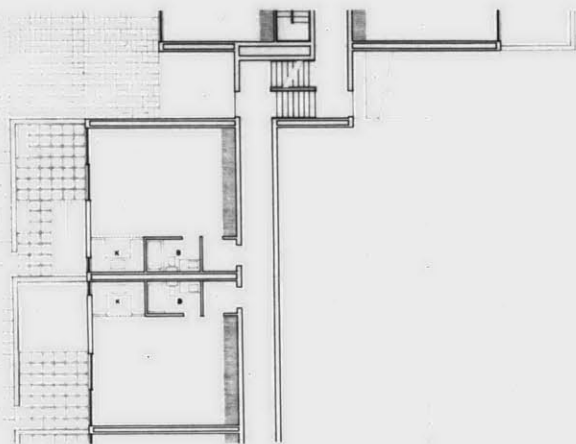
SECTION
0 5 10 20 40

MARRIED STUDENT HOUSING
FOR THE UNIVERSITY OF CINCINNATI
MASTER OF ARCHITECTURE THESIS
MASSACHUSETTS INSTITUTE OF TECHNOLOGY
AUGUST 1961 DON A. ELLIS

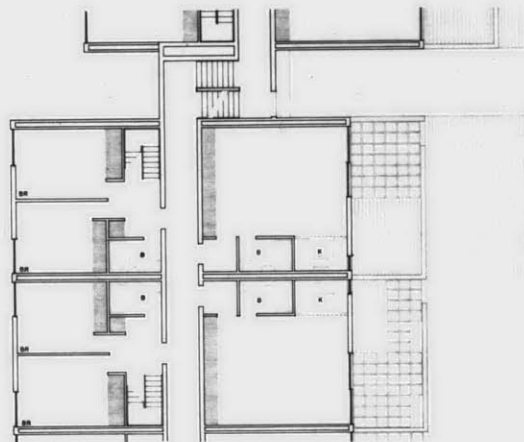


SECTION
0 5 10 20 40

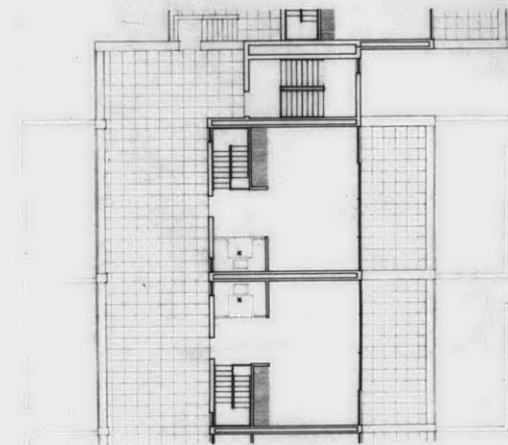
MARRIED STUDENT HOUSING
FOR THE UNIVERSITY OF CINCINNATI
MASTER OF ARCHITECTURE THESIS
MASSACHUSETTS INSTITUTE OF TECHNOLOGY
AUGUST 1961 DON A. ELLIS



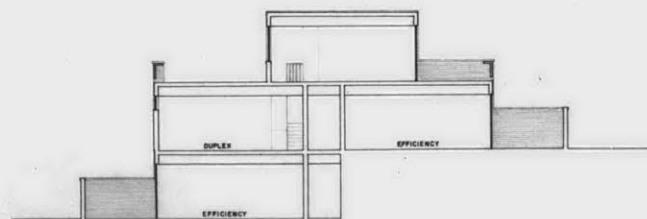
GROUND FLOOR - LOW SIDE



GROUND FLOOR - HIGH SIDE



UPPER FLOOR



TYPICAL SECTION

DETAILS
0 5 10 20

MARRIED STUDENT HOUSING
FOR THE UNIVERSITY OF CINCINNATI
MASTER OF ARCHITECTURE THESIS
MASSACHUSETTS INSTITUTE OF TECHNOLOGY
AUGUST 1961 DON A. ELLIS